

Social media and the rise of predatory journals: A case report

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Abstract

This is a report of our experience with a predatory journal that invited us to join them after having seen our winning essays on how to identify predatory journals.

We applied the system we recommended therein to investigate the true nature of the journal and in so doing, provide readers a model of how to go through such an investigation. We also reflect on the extensive role of social media, ranging from helping these publications to target prospective authors with ease to increasing awareness and educational initiatives among researchers, publishers, and academic institutions.

Our winning essays, selected for the 2019 Geoff Hall Scholarship, were focused on identifying predatory journals. 1 We have now been targeted by one such journal. Five months after our essays were published in Medical Writing, we received 10 requests to become reviewers or contributors and join an editorial board. The fact that these requests all originated from a questionable journal was not only ironic, but baffling. We decided to take the opportunity to report this case. We followed our own published advice1 on how to systematically evaluate all relevant aspects of the journal, to show that it is indeed a questionable journal that should be avoided.

In this article, our aim is **not** to identify the journal or publishing group by name. The reason for this is two-fold: (1) denouncing a publication is not our primary goal, as there are other platforms dedicated to that practice (which will be mentioned later); and (2) we want this case report to be applicable to recognising any predatory journal, and be a useful example for readers to adopt their own identification strategies.

How did they find us? The link to social media

Medical Writing is primarily available to members of EMWA and is indexed in Scopus, Google Scholar, NIH National Library of Medicine, ResearchGate, and EBSCO.2 In addition, we



Figure 1. One of 10 emails sent by the same journal

Each email was sent with a different editor's name and had a different colour scheme.

believe that social media sharing may have played a pivotal role in publicising our work among our peers and others. Articles published in *Medical Writing* are regularly promoted on LinkedIn and through the official EMWA Twitter account (@Official_EMWA). This questionable journal likely used the email addresses associated with each essay and did what they do best.

Clues and disparities

The disparities started at the very top with the sender's names and email addresses. Each of the 10 emails received (at the time of writing),

although originating from the same journal, were sent by a different editor, each time with a different domain name. Some addresses corresponded with .com. The domain name associated with the email address, differed from those of the links within the email to obtain "more information", which in turn, also differed from

those on the journal's website. They seemed to use one or two email templates for guidance, but

each email differed in colour scheme and showed slight differences in wording. Figure 1 shows just one of the 10 variations of emails sent by the questionable journal. Considering these editors were supposedly representing an academic publication, sentence construction was awkward and convoluted, both within the emails and on the journal's website.

Website of the questionable journal

The title of the journal, as expected, closely resembled those of at least two other journals; one seemed to originate from a reputable publisher, while the other seemed to have questionable origins. Although we were cautious to avoid clicking the links within the emails, an online search of the journal's title led to two separate websites, both of which seemed reasonably professional at face value. However, on closer examination, the disparities inevitably surfaced. Both websites featured the same journal title, one featured a blue colour scheme, while the other's was red. As expected, the article processing charges (APCs) were prominently featured on both websites (Figure 2).

In addition to the relatively high number of journals published by the group (more than 500 titles), rapid publication times were prominently featured (generally within 50 to 90 days). A closer look revealed that 46% of the titles were some variation of "International", "American", or "European Journal of..." reflecting similarities to the names of legitimate publications, and thereby, effectively hijacking those titles. Contact information included a North American phone number and address, which ultimately led to a

rental office block in New York. However, it was not clear whether the publishing group was physically located at that address (Table 1).

The aims and scope of the journal had no association with the titles and topic of our essays. Nevertheless, the editors of the journal claimed to have been "greatly impressed by our papers" (on how to identify predatory journals!). Neither essay had an abstract, but that did not stop the various editors from referring to

an abstract in each email. The homepage of the journal states that it has been listed in "14

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Table 1. Application of the 5 Ws (Who, What, When, Where, and Why) to determine whether journal is legitimate or predatory

First contact: Who - What - When - Where - Why

WHO	Do you recognise the name of the journal or publishing group?	No
	Online information about journal	Scope Journal website states that they publish research articles in the field of biomedical sciences. Does not apply to our article 68 editorial board members and 35 reviewers listed on the page – not common practice to list reviewers on a journal's webpage
	Online information about publisher	 552 open-access journals, of which: 149 "International Journal of" 96 "American Journal of" 8 "European Journal of" combined with variations of similarly named legitimate journals. Accounts for 253 of the 552 journals: 46% of their entire publication list
WHAT	What do they want?	 They are impressed with our article Asked us to publish articles in their journal, or Join as Editorial Board Member/Reviewer
WHEN	Timeline of events	 Article published: June 2020 First contact: September 2020 Received 10 emails at the time of writing (December 2020)
	Emails from journal	Flagged as spamAlways different email domainsAlways different editor names
WHERE	Physical location of publishing group	Undetermined, the address is of an office block in New York. Block website only lists offices for hire and does not give any information about offices rented.
WHY	Journal invited us to become reviewers/ editorial members	Per journal's website requirements for potential reviewers/editorial members/Editor-in-Chief, we do not fulfil their criteria. Why did they actively invite us to apply to a position for which we are not qualified?

Abstracting and Indexing" databases, most of which are unfamiliar. We accessed them all and the journal was actually indexed in eight databases. Three of those databases were dubiouslooking paid indexes, and on closer scrutiny we found the membership fees prominently displayed on the webpages. The indexing criteria simply included possession of a valid International Standard Serial Number (ISSN) and a minimum of two published issues (characteristics of all journals, regardless of their legitimacy [Table 2]).

Peer review and impact factor

Although the words "peer review" or similar phrases appeared repeatedly in the emails, the process by which this is achieved was not clearly outlined on the website of the questionable journal. An impact factor could not be readily determined, and is currently listed as "waiting", even though the first issue was published more than five years ago.

Blacklists, whitelists and Think. Check. Submit.

Currently, lists of predatory publications (blacklists) and lists of legitimate publications (whitelists) exist. The first and most popular blacklist was Beall's List, which ran from 2011 to 2017. After Beall shut down the website, other scholars - who prefer to remain anonymous to prevent the harassment to which Beall was subjected - took up the job of maintaining and updating the list. At the time of writing, two major websites exist: Stop Predatory Journals3 and a new Beall's List.4 Legitimate open-access journals are listed in accredited directories, such as the Directory of Open Access Journals (DOAJ)5 and the Open Access Scholarly Publishers' Association (OASPA).6 Similarly, legitimate publishers should be members of the Committee on Publication Ethics (COPE).7

Our questionable journal and publisher failed the test on all lists and directories. While this is a major point to confirm that it is indeed a predatory journal, such listings should not be the only source of information. The number of predatory publications is steadily rising, and it is difficult to keep up with this growth and update blacklists on a regular basis. In addition, predatory journals sometimes sneak into whitelists and go unnoticed. A good method to guide such systematic analysis is Think. Check.

Who is Responsible for Paying the Article Processing Charge? Upon an article is editorially accepted, the corresponding author will be notified about the payment issue, which is charged to either the author, or the funder, institution or employer. When and How do Authors Pay? The submitting author needs to arrange payment of the article-processing charge unless a waiver has been granted. Following peer review, once a manuscript has received editorial acceptance in principle, the article-processing charge becomes payable and formatting checks on the manuscript will commence. Once formatting checks are completed, and payment of the article-processing charge has been Science Publishing Group currently supports the following payment methods: · Payment through PayPal . Pay with Debit or Credit Card Wire Transfer in US Dollars (USD) Western Union in US Dollars (USD) MoneyGram in US Dollars (USD) We recommend you use our PayPal Secure Payment system: *Wire*tran\$fer MoneyGram. **PayPal** Are reprints of my article included in the Article Processing Charge (APC)? - No. Article Processing Charge (APC) do not entitle the authors to receive reprints of their published article. Reprints can be ordered separately and optionally for any article that has been published in a journal. To request an offer for reprints of an article, please send an e-mail to

Figure 2. One section of an entire webpage of the questionable journal

Note the inclusion of various money transfer services.

Submit.8 This is an online checklist developed by a coalition of scholarly publishing organisations and the template we adapted to analyse our case report.

What's the harm? Long-term consequences

The questionable publishing group has a presence on Twitter (with over 1000 followers), Facebook (over 4000 likes), and LinkedIn (over 1000 followers, and lists over 100 employees). Their content varied between popular science and their own articles.

The journal has a total of six volumes. Each volume has six issues, and each issue has between one (!) and five articles, meaning that the total in 36 issues range from 36 to 180 articles. A small percentage of what appears to be scientifically sound articles include pre-clinical research and the validation of a new analytical method, the authors of which belong to a pharmaceutical company that developed the specific method.

We also need to consider who these authors are. Some can be legitimately mistaken and unaware that they have submitted their articles to a predatory journal, while others might want to take full advantage of the model to increase their number of publications and supposedly improve their professional reputation.9,10

But what exactly is the problem? Does it end there? Shouldn't these researchers make their own choices and publish where they want? Not quite researchers following the tenets of scientific method consult published data and build their own research Table 2. Indexing and membership checklist (adapted and modified from Think. Check. Submit.)

Database Listings and Association Membership

WHAT THE JOURNAL CLAIMS

Website: Journal is indexed in 14 databases

- Indexed in 8 databases
 - 3 seem to be paid index databases with questionable membership criteria
 - 1 clearly states that it does not provide an indexing service and stakeholders should suspect any journal that says it is indexed in their website
- 3 dead links
- Not indexed in 2 databases
- 1 is not a database but a career portal

WHERE THE JOURNAL SHOULD BE IF IT WAS LEGITIMATE

Publisher belongs to COPE? publicationethics.org	No
If OA journal: listed on DOAJ database? doaj.org	No
If OA journal: publisher belongs to OASPA? oaspa.org	No
Article Processing Charges?	Process fully explained: amount to be paid by journal is clearly stated and the payment is only made after article undergoes peer review

Abbreviations. COPE, Committee on Publication Ethics; DOAJ, Directory of Open Access Journals: OA, open access; OASPA, Open Access Scholarly Publishers' Association.



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from it. However, if those data come from a questionable or predatory journal, without peer-review and no guarantee of fulfilling scientific criteria or data quality, any subsequent results will also be invalid.¹⁰ We can catch a glimpse of the

true dimensions of the problem by considering the very high number of predatory titles. In 2017 there were 8000 predatory publications, with an output of more than 400,000 articles a year. Considering the exploitative tactics of these publishers, these numbers must be considerably higher today – and may have a more considerable impact on legitimate scientific scholarship.

Social media: A tool to fight back

Since the inception of *Beall's List*, which effectively coined the term "predatory journal", awareness about these publishers and their tactics has been steadily increasing. Academic libraries and publisher organisations now include sections on predatory publishing and tips on how to avoid it.^{12,13} In 2019, the American Medical Writers Association (AMWA), EMWA, and the International Society for Medical Publication Professionals (ISMPP) released a Joint Position Statement on predatory publishing.¹⁴ Further initiatives from EMWA include the Medical Communications Special Interest Group, which also shares a focus on predatory publications.¹⁵

At EMWA's Virtual Conference 2020, ¹⁶ 85% of attendees at one presentation on predatory publishing claimed that they would like to see this topic developed further at future conferences. ¹⁷

On both LinkedIn and Twitter, #PredatoryPublishing is used by editorial associations, publishers, and individual writers and researchers to share their experiences, denounce the practice, and increase awareness of these publications. One Twitter account, led by a group of academics with a focus on fake journals, claims their mission is to "rid scientific publishing of fake and predatory journals". They have over 3000 followers and share regular tweets informing and educating the public about predatory journals.

Occasionally, researchers devote some time to sting operations that wonderfully illustrate both the lack of scientific rigour and the for-profit model of these questionable publications. These operations tend to be both brazen and hilarious, which makes them highly "shareable" among professional/academic networks and social media, once the author reveals the deception. In

March 2020 – with only four days between receipt and publication – the American Journal of Biomedical Science and Research (a publication of the infamous OMICS group¹⁸) published an article linking COVID-19 to the consumption of Zubat, a Pokémon character.¹⁹ Not only was Gregory House M.D. one of the authors and Winnie the Pooh one of the references, the actual text of the article states "Epidemiologists believe it highly likely that a journal publishing this

paper does not practice [sic] peer review and must therefore be predatory". It really does not get more brazen than that.

To summarise, we have systematically explored all major aspects of identifying a predatory journal. We can confidently conclude that both this journal and their publishing group are predatory, with characteristic promises of fast publication times for a fee. Considering the low quality of individual articles, we felt there might have been a total lack of peer review. With this case report, we have shared our experience dealing with these publications and our strategies to positively identify them. We have also explored the role of social media, both in enabling these publications, as well as being used as a tool to educate others and raise awareness about the problem.

Now it's time for **you** to put these skills into action, so we can effectively identify these publications and collectively combat predatory publishing.

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Conflicts of interest

The authors declare no conflicts of interest.

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